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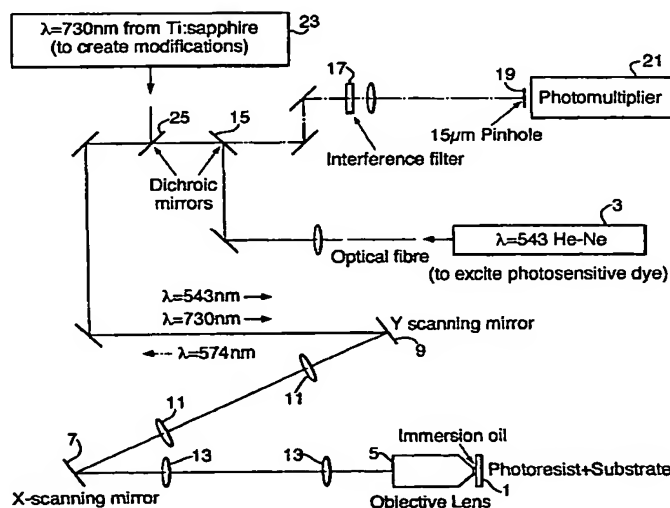
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- (71) Applicant (for all designated States except US): **ISIS INNOVATION LIMITED** [GB/GB]; Ewert House, Ewert Place, Summertown, Oxford OX2 7SG (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **TUBERFIELD, Andrew, Jonathan** [GB/GB]; 29 Derwent Avenue, Headington, Oxfordshire OX3 0AR (GB). **DENNING, Robert, Gordon** [GB/GB]; 26 The Row, Tootbaldon, Oxfordshire OX44 9NE (GB).
- (74) Agents: **NICHOLLS, Michael, John et al.**; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).
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(54) Title: IMPROVEMENTS IN OR RELATING TO MULTIPLE EXPOSURES OF PHOTSENSITIVE MATERIAL



(57) Abstract: A method of accurately registering successive exposures of photosensitive material by forming between the exposures an image of the latent exposure pattern caused by initial exposures. In a photosensitive material comprising a photo acid generator and an acid-catalysed cross-linkable resin precursor, the image may be obtained by including in the photosensitive material a pH sensitive dye which responds to the liberation of acid in the first exposure to reveal the position of the first exposure. The image may be a three-dimensional image which is then used to control the position and intensity of further exposures. The technique is particularly applicable to the production of photonic crystals with local structural modifications such as are required to define waveguides or resonators.

WO 2004/038467 A3



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G02B6/12 G03F9/00 G03F7/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 139 995 A (BURM JINWOOK ET AL) 31 October 2000 (2000-10-31)	1,2,12, 20-22
Y	column 2, line 59 - column 3, line 39; figures 3-5 column 6, line 38 - line 64	11
X	US 6 344 892 B1 (SUGITA MITSURO ET AL) 5 February 2002 (2002-02-05)	1
	column 4, line 11 - column 5, line 36; figures 3,4 column 7, line 7 - line 23	
Y	US 5 847 812 A (OKAMOTO KAZUYA ET AL) 8 December 1998 (1998-12-08)	11
	column 1, line 65 - column 5, line 21 ----- -/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo.nl,
Fax: (+31-70) 340-3016

Authorized officer

Andreassen, J

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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